

CURRICULUM JOURNAL

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NEWS NOTES

The California Experimental Secondary Schools. During the last few years many administrators and teachers of the secondary schools of California have applied themselves with energy and thoroughness to the problem of devising a curriculum better suited than previous practices have been to the mental, physical, and social needs of young people. The Cooperating Schools consist of a group of secondary schools which have been leaders in the movement. By special arrangement with the colleges and universities of the state, such modifications of the curriculum may be made as those in immediate direction of these schools deem best; if criteria upon which college entrance is ordinarily based are modified, admission to regular standing in freshman classes is nevertheless assured. Local administrative authorities are thus guaranteed freedom in planning. The State Department of Education has recently issued a bulletin containing an account of the developments in this group of schools during the first year and a half of their existence as Cooperating Schools. The bulletin was prepared by Aubrey A. Douglass, Chief of the Division of Secondary Education, State Department of Education, assisted by F. C. Wooton, Acting Associate Professor of Education, Claremont Colleges, who has with great effectiveness rendered assistance to the State Department of Education in its responsibilities toward the Cooperating Schools. The list of Cooperating Schools follows: Burbank Senior High School, Burbank; David Starr Jordan High School, Long Beach

(senior high school); Eagle Rock Junior-Senior High School, Los Angeles; Benjamin Franklin High School, Los Angeles (four-year high school); James A. Garfield Junior-Senior High School, Los Angeles; Manual Arts Senior High

EDITORIAL NOTE

The sudden decision to print the CURRICULUM JOURNAL was due to an unexpected rise in the cost of mimeographing. It is with some regret that we change our costume. The old JOURNAL possessed an intimacy and a flexibility which we shall probably miss in the new format. In our old garments we were free from the inhibitions that come from the awareness of a large audience. We are not unmindful of the advantages and opportunities of a printed magazine. It will challenge us to be more careful in the selection and preparation of manuscripts.

The new size and format of the magazine are dictated by our financial resources but they are in keeping with the present trend toward small magazines. The two-column arrangement conforms to the common reading habits formed largely by extensive newspaper and periodical reading. The size and spacing of type will be increased as rapidly as the Society's finances will permit.

School, Los Angeles; Fremont Senior High School, Oakland; University Senior High School, Oakland; Pasadena Senior High School and Junior College, Pasadena (grades eleven to fourteen); Sequoia Union High School, Redwood City (four-year high school); Santa Monica Senior High School, Santa Monica.

Commission Report Studied in Philadelphia Area. The increasing number of reports of commissions in the Progressive Education Association has made it necessary to develop new conference machinery to insure the study and application of the findings in these documents. For this purpose four seminars were held recently at the Friends' Central School which were attended by interested persons in the Philadelphia area. Two of the seminars were devoted to a discussion of curriculum revision based upon progress reports of the Commission on the Secondary School Curriculum which is now in the third year of a five-year program. The meetings were held on two successive Saturdays, each day being devoted to two general sessions and two series of long sectional meetings. The general themes included: The Basis for Curriculum Revision; Study of Adolescents and Implications for the Curricula; The Curriculum for an Understanding of Human Relations; and the Evaluation of a New Curriculum. The discussion leaders were V. T. Thayer, chairman of the Commission on the Secondary School Curriculum; Caroline Zachry, chairman of the Committee on the Study of Adolescents of the Commission on the Secondary School Curriculum; Ralph Tyler, research director of Committee on Reports and Records of the Commission on the Relation of School and College; Alice V. Keliher, chairman of the Commission on Human Relations; Karl Bigelow, chairman of Committee on Social Studies of the Commission on Secondary School Curriculum; Emmet Grown, science teacher, Lincoln School of Teachers College;

Earl Goudey, science teacher, Bronxville Public Schools; Frances G. Sweeney, social sciences, Lincoln School, Teachers College; H. E. Wilson, School of Education, Harvard University.

Virginia State Department Issues a New Bulletin. With the publication of the Core Curriculum of Virginia Secondary Schools, Grade IX, D. W. Peters, Director of Instruction, raises a number of questions for consideration by the school people during the current year. Assuming that the problem of procedure based on social functions is a satisfactory basis, is it desirable to furnish leads to all of the phases of each problem? This would require a more complete treatment than that of the present bulletin. Is organization over-emphasized so that form transcends vital experience? Is the principle of flexibility safeguarded? The challenge has been to provide guidance that is definite enough not to confuse the teacher when applied to practical conditions. There is evidence that the teachers are moving in the direction of the underlying concepts of the curriculum program. During the last academic year, two-thirds of the schools were making complete or partial use of the materials contained in the bulletin for Grade VIII. Over three thousand teachers reported the purchase of professional books, showing a considerable amount of reading and study among the teachers.

A Guide for Community Study. The Procedures Committee of the Georgia State Curriculum Program has prepared a mimeographed guide to the study of the community. It is recognized that the needs and interests of the pupil arise from environmental conditions. The immediate environment is conceived of as the local community with its occupations, schools, churches, social organizations, shops, recreational facilities, means of transportation and all that affects and contributes to life. In the large sense, however, the environment

is interpreted as the constantly expanding community, the world community with the major social, economic, and industrial problems, the opportunities for service, the world of science, letters, invention, art and music. The suggested techniques for the study include observation, interview, and research. The manual includes seven illustrative procedures and a helpful bibliography.

The Louisiana Program of Curriculum Development. The purpose of the Louisiana State Program of Curriculum Development is to improve teaching and learning. The first step in the program is a period of study for which a special bulletin was prepared at the Louisiana State University during the summer of 1936 by a group of fifty persons representing the various school levels in a course conducted by E. B. Robert and A. M. Hopper. The bulletin contains a list of study questions, a discussion of the main topics, quotations related to these topics, and suggested references. The final outcome of the whole program will be the preparation and installation of tentative courses of study, which will guide the teachers of the state in a continuous development and evaluation of the curriculum.

Panel Agrees on Progressive Trends. At the panel conference on Improvement of the Curriculum at the Pennsylvania Education Congress held in Harrisburg, it was the consensus of opinion that the word curriculum should include more than the materials in the formal course of study. Rather it should be considered as a process of living, involving all of the child's life for which the school carries responsibility. In emphasizing the point that the child is of more importance than the subject matter, the idea was developed that, if the curriculum included the living of the learner, its procedure of necessity would become a continuous succession of activities or units of experience so guided and controlled that from them would evolve

growth for the child in many respects. In addition to the development of knowledge, other phases of all round development of an individual, such as the physical, social and emotional efficiencies, could be furthered more effectively. The contention was that through these life situations, involving diversified activities of varying difficulties, individual differences among children could be better recognized and the necessity of choosing between acceleration and enrichment might thereby be avoided. It was felt that in most districts, the curriculum was formed largely for the small percentage of pupils who intend to enter college. It was generally agreed that a great deal more attention should be given to the non-college group. A diversified curriculum, including home buying, consumer education, industrial arts and socio-economic problems and similar courses was mentioned as a partial solution.

The Michigan Curriculum Publications. The State Department of Public Instruction of the State of Michigan announces that the new series of curriculum bulletins will have five major emphases: 1. *Functional Learning.* Real life experiences rather than artificial textbook situations are emphasized. It is expected that learnings will be related to natural rather than artificial or improved situations; 2. *Child Growth.* Objectives and activities are presumably placed according to the child's ability to grow and power to achieve, and give opportunity for child purposing, planning, executing, and evaluating; 3. *Integration of Subject Matter.* There is an obvious tendency to integrate subject matter into large units of instruction and according to natural psychological patterns; 4. *Natural School Atmosphere.* The trend in the curriculum materials is to depart from unnatural school environment; 5. *Development of Creative Ability.* The activities and objectives tend to stress the development of the individual as a worthy member of his group and to

assist him in the acquisition of attitudes, habits, knowledges, and skills that will accelerate his adjustment and increase his capacity to achieve.

Revision of the Curriculum In Ontario. The thorough revision of high school and vocational school courses of study is now being carried through. A committee composed of six members representing the Ontario Department of Education; three representing the high schools and collegiate institutes; three, the composite schools; and two, the vocational schools, has been named by the Minister of Education, and has already held its initial meeting. This committee will take into account the fact that of late years there has been an increased demand for the introduction of more practical courses in all types of secondary schools and a greater insistence on the value of the school diploma as compared with the Matriculation and Normal Entrance certificates. It will be influenced, too, by the general belief that too much emphasis has been placed on the traditional subjects of instruction, and that all secondary schools should offer a general course leading to a school diploma, which will have a fair proportion of both academic and vocational subjects.

A New Child Development Center. Walhalla House, located at Walhalla Road, Columbus, Ohio, is a new child development center. It is an independent venture sponsored by a group of socially disposed professional educators for the purpose of extending the community experiences of students and bringing within the reach of intelligent parents the facilities for coordinated expert services which have a direct bearing on child development. Dr. Laura Zirbes serves as director of this child development center. She continues her work as Professor of Education at Ohio State University, but contributes her free time to Walhalla House in exchange for certain participation and laboratory privileges for her advanced students. Present

plans include arrangements for the regular service of a nurse, and for medical and psychological advisory service on call. The facilities of Walhalla House are admirably adapted to its program. The wooded grounds and the brick building are attractive and spacious. The resident supervisor occupies a first floor apartment, furnished as a home in which the needs of young children receive special consideration. Living quarters for an additional staff worker and accommodations for house guests are on the second floor in connection with a spacious social hall. This large room has flexible equipment and is used by adult groups as well as children. It has a stage and facilities for amateur dramatics; it has a library alcove, an arts and crafts corner, folding chairs and tables for dining. These arrangements make the house an attractive center for week-end conferences and evening gatherings in which staff, parents and students have an active part. This is a step in the direction of a school of living. Its implications for the experience curriculum are significant.

Revising the Curriculum in British Columbia. The Education Department of British Columbia has just published its Program of Studies for Junior High Schools. The 6-3-3 organization is adhered to: six grades or six years in the elementary school; three in the junior high school; three in the senior high school. Examinations are relegated to the background. Promotion by subjects, already in vogue in a number of British Columbia secondary schools, is advised for all. The Program of Studies for Junior High Schools is the work of teachers actually engaged in teaching. Departmental officials assisted, but the fifteen committees responsible for the present volume consist of classroom teachers. Unity of purpose and method was maintained by constant consultation with the department's Technical Adviser, Mr. H. R. King, Principal of Kitsilano Junior and Senior High School, loaned by the Vancouver Trus-

tee Board for work in the wider field. In the new program the library has been given a more important place. Physical education is closely associated with health education. Music, vocal and instrumental, is to receive greater emphasis. Art is to be studied and practiced as a cultural subject, and not less as an element of the highest practical value in industry. In connection with the study of agriculture the pupil is supposed to cultivate a garden of his own. The new curriculum is based on the assumption that the school should exemplify superior living.

Curriculum Adaptations in a City System. Recognizing the highly experimental nature of the Arkansas State Curriculum Program and the tentative characteristics of the materials, the staff of the Fort Smith schools will undertake during the ensuing year to do three specific things. First, a careful summary of the local program to date will be made, including outstanding accomplishments and obvious shortcomings. Second, an intensive study of the materials suggested in the tentative courses of study for Arkansas schools will be made by every teacher in the system under the guidance of the respective principals. Third, committees of teachers on each of the four levels of primary, intermediate, junior high, and senior high will take the materials suggested in the tentative courses of study and adapt them for publication in a proposed Fort Smith Teachers' Manual of Child Guidance. This plan was presented by the curriculum director to the principals and teachers at the first general faculty meeting before the opening of the fall term of school and it received the unanimous endorsement of the group.

Curriculum Program the Formative Force in Kansas. Each state is developing its curriculum program more or less according to local conditions. In some places effort centers around the writing of courses of study under the direction

of the state department of education. In other states the program is more comprehensive and carries broader educational objectives. The Kansas program is of the latter type, where the aim is improvement of instruction at every point where the school touches the child. Courses of study, developed through experimentation, may eventually appear, but the program in Kansas is not a restricted one of course of study writing.

In the first few months of development in Kansas, it is evident that the program is becoming a powerful formative force in education. It is unifying the profession on the basis of cooperative effort for educational improvement. It is centering thought and study on basic educational needs of the state. Higher educational institutions are joining public school people and lay groups in whole-hearted support of the long-ranged program. It is most significant that group study and discussion, a democratic procedure, is the method used in the movement.

The educational profession is awakening to the need for a more vitalized school program, for a program that will function more realistically in training children for modern life. Just what the new educational offerings should be, will be determined through cooperative effort made possible by the curriculum program. The program promises to be the most significant movement in the history of schools in Kansas, for modern curriculum construction is the powerful formative force in education.

C. O. WRIGHT.

Oklahoma Develops Instructional Units in Safety. Under the leadership of J. Andrew Holly, the Oklahoma State School Safety Curriculum Committee is planning, installing, and evaluating units of safety instructional materials and activities on each grade level and in each of the appropriate subject-matter departments of the public school system. Committees of teachers are now developing safety instructional units in three curric-

ulum centers in Oklahoma. The material is planned so that it may be integrated with the subject matter and activities of the various subjects and courses ordinarily found in the elementary and junior and senior high school divisions of the public school system. The instructional units will be published and distributed as rapidly as possible for try-out purposes.

Functional Mathematics in High School. A new course in mathematics in the senior high school at Rockford, Illinois, provides experiences in solving mathematical problems of everyday life; emphasizes the social and economic implications of these experiences; prepares for further training in the fields of commerce, science, and industrial arts; and seeks to improve and maintain fundamental skills. Types of information studied in relation to these objectives include direct measurement; construction and interpretation of graphs; use of formulas; scale drawing to find inaccessible lengths; trigonometric functions; personal, home, and community problems as found in family budgets; installment buying, insurance, taxation, banking, savings, and investments.

Assemblies Grow Out of Classroom Activities. All school assembly programs are developed out of classroom activities in the Jefferson Junior High School of Meriden, Connecticut, of which H. J. Gwinn is principal. For example, one assembly program called *An American Tourist in China* grew out of an activity unit on China in Grade VIII, and embraced all phases of the study of China. Similarly, a ninth grade English class developed, out of its study of the short story, an assembly program showing a radio script of a story judged best suited to radio production. The class planned all details of the radio broadcast, including dialogue, sound, and announcing.

Science for Everyday Needs. A new course in high school physical science in the Los Angeles schools aims to have a problem-solving, creative type of activity

which meets the everyday needs of boys and girls of the city, particularly those who do not wish to take college-preparatory science. Relation of this new course to actual problems of society are indicated by the titles of the units, which are: Water Purification, Petroleum Industry, Electroplating and Electroforming, Chemical Sources of Electricity, Modern Methods of Communication, Conquering the Air, Artificial Refrigeration, The Evolution of Lubrication, The Mystery of a Magnet, The Evolution of Textiles, Lighting the World, Paints, Photography, and The Rubber Industry.

A Museum for Children. In Reading, Pennsylvania, the Board of Education has provided a public museum under the direction of Levi W. Mengel. Buses are provided to transport children to the museum, where they attend lectures, study pictures and objects, and perform experiments as a regular part of a carefully planned educational program. Recently, the museum has featured an art exhibit to which local artists contributed more than three hundred entries. An attempt is made to assemble materials which will give children some opportunity to study the entire range of human activity throughout the world.

Consumer Materials. The American Home Economics Association is offering mimeographed materials in consumer education for distribution among teachers periodically at a fixed rate of \$1.00 per year. Subscriptions received now will include the material previously prepared: 1) an annotated list of books, bulletins, and mimeographed material of use to teachers and leaders who have only limited time, funds, and library facilities; 2) a news letter dated June 1936 which cites recent developments in standardization, labeling, government aid to consumers, new publications, cooperatives, advertising, and trade promotion. Prepaid orders may be sent to American Home Economics Association, 620 Mills Building, Washington, D. C.

ENLISTING THE HIGH-SCHOOL TEACHER'S INTEREST IN CURRICULUM REVISION

By CHARLES W. KNUDSEN, Harvard University

High-school teachers are not as willing to modify their teaching practices as are teachers of equivalent training in the elementary school. The same statement is true of their willingness to modify their thinking about curriculum revision. The reason for the difference in attitude is partly due, perhaps, to differences in professional training. Whatever the cause of the difference, high-school teachers lack confidence in their ability to embody in practice the ideas about curriculum revision they have gained through study. This lack of confidence is often wrongly interpreted as indifference or as a strictly traditional attitude when as a matter of fact it may be based on very logical grounds, viz., inadequate knowledge of how to proceed. The present writer holds the belief that this is the main reason that several large-scale, state-wide attempts at curriculum revision have had so little effect on the secondary division of the public-school system, particularly the senior high school.

Because it is very difficult to get the "feel" of a revised curriculum purely by reading or by listening to expository lectures, one method of enlisting more active interest of secondary-school teachers in curriculum revision is to encourage them to organize a "unit" for trial with a group of pupils whom they teach. Because a unit, if it be of the "experience" type, requires that hard-and-fast subject-matter boundaries be dispensed with, it is highly desirable to get a group of teachers to cooperate in developing the unit. This group should consist of three or four teachers who teach the same group of pupils throughout a day.

To test a method of enlisting high-school teachers' interest in curriculum revision, the author utilized an opportunity which arose in the Columbia (South Carolina) High School. The principal of this school had presented to his teachers a careful study of pupil failure covering a period of years. He and his teachers could not locate a cause for a high percentage of failures in the I.Q.'s of pupils, in the facts of home environment, economic necessity, or previous preparation. He and the teachers had been studying curriculum problems by way of the usual method: reading and listening to lectures. "May it not be possible," the teachers asked, "that the curricular experiences in which our pupils engage can be made more purposeful? And if they can be made more purposeful, may we not reduce the percentage of failures? Further, if pupils are to become more purposeful, what changes will we have to make in our curriculum and methods of teaching?" Obviously an adequate answer to this question would involve a great many considerations—such a large number, in fact, that a great deal of time must elapse for a complete answer. "May we not," they asked, "make a beginning by trying to develop an experience unit with some of our groups?" The principal welcomed the idea and, when classes were organized in the fall, he enrolled pupils in the classes of each of three teachers in the ninth grade so that the same pupils were assigned to one class of each teacher. By such an arrangement all three teachers could deal with the same group of pupils on any unit they chose to try.

The planning of this unit began

during the summer vacation. These considerations guided the teachers in the choice of a unit: 1. the unit must be one that teachers are capable of developing with pupils; 2. it must grow out of an immediate life interest; 3. its development must be such that growth in pupils is in the direction of an acquisition of learning held to be desirable; 4. the material needed for developing the unit with pupils must be available.

In August three teachers elected to plan a unit on highway safety. The State of South Carolina issues drivers' licenses to residents of the State who are fourteen years of age or over. Consequently many pupils in the ninth grade will be interested sometime during the year in obtaining a driver's license. The city and county officials of Columbia are, during the fall of 1936, engaging in a campaign to educate citizens to the necessity for increasing highway safety. Therefore a unit on highway safety could very well have its origin in a real life situation. They next set forth what they held to be desirable aims for a unit on highway safety.

1. To afford an opportunity in school for a type of experiencing which is closely related to a life situation.
2. To facilitate the pupils' abilities to use their mother tongue in expressing their ideas about highway safety and ideas closely related thereto.
3. To afford an opportunity for developing the ability to see the justice of most highway laws, the need for other laws (e.g., laws regarding cattle on the highway), and the kinds of actions which are advisable in repealing unjust or inappropriate laws.
4. To engender attitudes of courtesy and caution in driving.
5. To engender abilities to present ideas effectively to other persons who may be persuaded to see the need for greater safety on the highway.

6. To engender an understanding of the principle that one's right to control machines is related to one's responsibility to one's fellows.
7. To engender an understanding of the dangerous potentialities of the modern motor car as well as an appreciation of its potentialities for the betterment of man.
8. To engender an understanding of the relationship between the physical properties of a rapidly moving car and its character as an agent to destroy life and property.
9. To engender a responsibility for keeping brakes, lights, tires, steering mechanism in good order.
10. To develop the attitude that the pupil's license to drive is a symbol of his skill, his intelligence, and his respect for the rights of others.
11. To develop the ability to see the complex problems of highway safety as an accompaniment to the changes introduced in a machine age.

The next step was to gather material for use by pupils in developing the unit on highway safety. The bibliography of material is too long to include in this article. It may be stated, however, that it included two books, twenty-two articles in periodicals, and thirty-four pamphlets, all of which were made available.

The three teachers—Miss C in English, Miss W in mathematics, and Mr. D in social science—planned the manner in which they would conduct the unit. Work actually began on the unit October 30. The English teacher, Miss C, accepted responsibility for initiating work on the unit. Her class came at the last period of the day. She planned to begin by placing on her bulletin board a poster on highway safety about which she would make no comment. She planned that on November 1 she would read or tell a story about some phase of highway safety and chose as her story, "Wait for the Green Light" in *Hygeia*. After this story she planned to begin a general and

informal conversation, asking some or all of the following questions:

1. How many of you are old enough to drive a car?
2. How many now have drivers' licenses?
3. How many expect to have them at some time?
4. Do you know how many fatal automobile accidents there were in our county in 1935? How many have there been so far in 1936? What has been the main cause of these accidents?
5. What Columbian was recently given a trip to New York as a reward for an excellent safe-driving record? Does anyone know him? What was his record?
6. Do you know anyone else who has a safety record as good?
7. What is being done to encourage highway safety in our community and in our nation?

By these and similar questions she hoped to give opportunity for pupils to tell or write something of their experiences in highway accidents or in the prevention of accidents. She then planned to ask if the pupils would like to center their work for the next two weeks about the general topic of highway safety and, if she had been skillful enough to receive the desired affirmative answer, to ask the pupils for suggestions concerning the manner in which they would plan to attack their work on the safety unit. She then made out a list of activities which she assumed would be suggested by work on the unit. This list follows.

1. Letter writing
 - a. To prospective speakers
 - b. Thanking speakers for coming
 - c. To other communities for material
 - d. Thanking people who assist us in any way
2. Talks based on reading, observation, and interview
 - a. On cause of accidents

- b. On safety devices
- c. On prevention of accidents
- d. On accidents caused by speeding
- e. On law enforcement
- f. On signals
- g. On proper driving procedure
- h. On care of cars

3. Debates

- a. Every driver convicted of drunken driving should have his license revoked.
- b. Every automobile owner should be required to carry liability insurance.
- c. The age of obtaining licenses in our State should be raised.

4. Creative activities

- a. Cartoons
- b. Words for a song to a familiar tune
- c. Original story or play
- d. Interviews
- e. Newspaper stories
- f. Safety slogans
- g. Safety scrap books, including graphs

Miss C obtained enough copies of *And Sudden Death*, *Murder on the Highway*, and *Calling All Drivers* to give each class member a copy. She planned to use the second class period as a reading hour in which pupils were to be given access to the materials which had already been collected. It was agreed among the three teachers that probably by the third day the pupils would have started on the unit on safety in the other two classes. The class would then be divided into groups according to interests, each group having a chairman as organizer and director. Miss C planned that her duty to the group during her period would be to help pupils find materials, to act as adviser when necessary, to be alert for opportunities to give suggestions, and to foster developing interests. She planned that a good deal of the work of the class would be in the nature of group reports, each group chairman having charge of the class in turn.

The mathematics teacher, Miss W, expected to use her class as a period when understandings involving mathematical concepts encountered in the unit on highway safety would be engendered. These concepts and understandings, she held, would be those that related to the purposes of the pupils in attacking the unit on highway safety. In many instances she anticipated that the cues to the activities of the group would be gained in conference with Miss C or from the pupils themselves. Miss W anticipated, however, that some of the activities in which her class would be interested to engage would be as follows:

1. The 1930 census report shows slightly over 50,000 people as the population of Columbia. Students will make bar graphs showing number of deaths and number of injuries in Columbia in 1934 and 1935.
2. Making bar graphs showing number of deaths and number of injuries per 50,000 population in South Carolina and in the United States.
3. Comparison of number of deaths and injuries in Columbia with average for South Carolina and the United States.
4. Preparation of a bar graph showing total number of deaths from automobile accidents in the United States from 1925 through 1935.
5. Comparison of total number of deaths from automobile accidents in last ten years with the total number of deaths in all wars in which this country has participated.
6. Comparison of total number of deaths from automobile accidents in 1935 with total number of deaths from all accidents.
7. Comparison of total number of deaths in 1935 with total number killed in American Expeditionary Forces during eighteen months of participation in World War.
8. Making bar graphs showing rate per 100,000 population of deaths from heart disease, cancer, accidents, pneumonia, cerebral hemorrhage, chronic nephritis, and tuberculosis.
9. Comparison of number of persons injured with number killed.
10. Comparison of number of persons injured with total number of miles of roadway.
11. Illustrating by bar graphs number of registered cars in the United States by five-year periods since 1895.
12. Comparison of number of cars in accidents with number of cars registered.
13. Comparison of number of registered cars in 1935 with total population.
14. Estimating how often average fatal accident happens in the United States and in South Carolina.
15. Showing by circle graphs the percentage of people killed and injured as a result of different actions of the driver, as a result of different actions of pedestrians.
16. Finding the ratio of the number of pedestrians killed to the total number of accidental deaths per year.
17. Picturing by line graph the number of persons killed and injured in automobile accidents by age groups in 1934.
18. Using bar graphs to show time, road location, light conditions, and days of occurrence of fatal accidents.
19. Making a table which shows speed in feet per second for various speeds in miles per hour.
20. Working out table showing reaction distance in feet at different speeds, using $\frac{3}{4}$ second for reaction time.
21. Using bar graphs, showing reaction distance and braking distance at speeds from 20 through 60 miles an hour.
22. Comparison of total stopping distance at 60 miles per hour with that at 30 miles per hour, at 40 with that of 20. Show that stop-

ping distance varies as square of speed.

23. If average parking space is 18 feet, showing how many parked cars a driver would have to pass from the time he sees danger ahead until he can bring car to a stop.
24. Making a chart showing danger zone of nose of an automobile at different speeds. Coloring these zones red.
25. Preparing a line graph showing the centrifugal force of a 3000 pound car making a turn of 500 feet radius at speeds of 20, 30, and 60 miles per hour.
26. Using the formula $V = 2gs$, find the number of feet a car would have to be dropped to give the same impact it would have if it stopped within its own length at speeds of 10, 20, 30, 40, 50 and 60 miles per hour. Show these distances by line graphs.

The social science teacher planned to assist in developing the unit by guiding and helping the pupils to deal with, select from, and study materials that are similar to those used by the other teachers. He anticipated that some of the class activities would be as follows:

1. A study of the State highway patrol. This study will include a talk by the captain of the patrol, and will center about the appointment of members, their duties, and the relation between politics and appointments.
2. A study of State traffic laws. This will include a study of present laws and discussion of such questions as the following:
 - a. Are there any obsolete laws?
 - b. How well are laws enforced?
 - c. Do courts cooperate in enforcing the laws?
3. A study of city highway patrol organization. The police commissioner or the chief of police will be asked to talk on this subject,

showing particularly how members are appointed and their duties.

4. A study of city traffic rules and regulations. Here the pupils will be asked to check drivers for traffic violations at given places during certain designated periods.
5. A study of requirements for drivers' licenses. During this study certain tests of pupils' ability and efficiency in driving will be made, and a mechanic will be asked to talk on the proper care of a car. It may be possible that as a part of a student's work he will want to demonstrate his knowledge of highway safety and ability to drive a car in order to earn a driver's license. The outcome of this suggestion will depend upon the kind of cooperation the school can establish with the officials of the city.
6. A study of courtesy and good sportsmanship in driving.
7. Presenting an assembly program on highway safety.

In planning the unit the teachers felt that they should give a considerable amount of attention to evaluating the work of their pupils. Since the main goal of the unit would be to facilitate the acquisition of attitudes, understanding, and skills which will function while these pupils are behind the steering wheels of moving automobiles, it appeared to the teachers that the only real test of the success of the unit would be found in the manner in which these pupils behaved while driving automobiles. In the case of those who actually would become drivers, they planned to use a score sheet to be filled in by a capable observer of the pupils' driving habits. They planned also to use a test which had been appropriated from the Indiana Manual on Traffic Safety. They planned further to keep a daily record of each pupil's behavior which would include: observation of the pupil while he is working; a record of the

way in which he planned his work and his success in completing what he had begun; a record of emotional stability; a description of the manner in which pupils put ideas together to form larger wholes; a record of social adaptability; a record of evidences of cooperation with others; a record of the manner in which each pupil reacted to unforeseen difficulties in the things he proposed. Some of these records admittedly do not afford data that lend themselves to statistical treatment but they are of a kind that is used daily in appraising the acts of those with whom social relationships are maintained. The teachers planned further to use the essay type of examination and the written and oral reports of pupils as indicators of their achievement. All of the above, including the theoretical considerations which were to guide the teachers, were put into the form of a thirty-five-page written report prior to a beginning on the unit.

The unit has been completed. The teachers have evaluated pupil achievement. The above record is submitted merely for the purpose of describing a method by which a small group of high-school teachers may plan and initiate work which has a distinct bearing on the revision of the secondary-school curriculum.

It will be noted from the foregoing description that the element of cooperation among the three teachers concerned is much more pronounced than is generally the case among a teacher of English, a teacher of mathematics, and a teacher of the social studies. During the planning of the unit and during its development these teachers regarded themselves as teachers of a group of boys and girls making an attack on the same unit of work. Frequent interchange of opinion was a positive necessity. Each class period under a given teacher was an opportunity for relating and synthesizing the different meanings acquired

by pupils in their work on the unit, "Highway Safety." Minor errors in thought or expression were corrected in the classroom where they were revealed, either by the teacher in charge or by members of the class. Errors judged to bear relation to some fundamental misunderstanding or inadequacy in learning were noted and referred for correction to the teacher who was best equipped to correct such errors. Thus a fundamental misunderstanding of the purpose of a highway law revealed in the English teacher's class would be referred to the social studies teacher for correction; a fundamental language difficulty revealed in the mathematics teacher's class would be referred to the English teacher, etc. Each class meeting offered a teacher two opportunities: (1) that of aiding in an attack on the unit, and (2) that of correction of fundamental difficulties in activities of pupils in their attack on the unit.

Often the curriculum "expert" is so intent on the preparation of a printed course of study that he remains innocently indifferent to the manner in which work in class-rooms will reflect the products of his thinking. It appears that five minutes devoted to sober reflection on the facts should convince one that the classroom is the place where curriculum revision will have to be effected. The writer makes no apology, therefore, for presenting a description that many of his colleagues will regard as trivial and as an elaboration of the obvious. His point is that nothing is more dimly perceived than the "perfectly obvious" aspects of putting revised curricula into effect. Furthermore, the successful prosecution by a small group of high-school teachers of an enterprise no greater than the trial of an experience unit requires a higher degree of intelligence, cooperativeness, zeal, open-mindedness, and skill on their part than is generally recognized.

A FUNCTIONAL COURSE IN THE PHYSICAL SCIENCES

By HAL BAIRD

The Francis W. Parker School, Chicago

There is a growing discontent with the present science courses in the high school. Patterned originally after more or less technical college science courses they have come down to the present moment practically unchanged except for the addition of the modern theories which have been formulated and the inclusion of many of the practical applications which have been made of those theories. This, in itself, has created a tremendous problem, for in order to properly understand this mass of material which has been added to the basic concepts of the physical sciences it is imperative that those basic concepts first be mastered . . . and that takes time and much study. The result has been that sensible teachers have sensed the impossibility of attempting to achieve an objective of such gigantic proportions and fallen back upon the old order of things and have made no serious attempt to really deal with the more modern concepts. A few of the more courageous souls have attacked the problem from the reverse order and have tried to teach the modern science without first laying the traditional foundation . . . and this also has many drawbacks, tending largely to develop a superficiality of understanding, and more unfortunate still, an intellectual arrogance that marks the individual laboring under the delusions of innumerable half truths.

Yet it must be admitted that science instruction has a legitimate, even a necessary place in the modern secondary school curriculum. It is the purpose of this article to describe that place and, if possible, to indicate the sort of science teaching best calculated to fill the need that obviously exists.

To begin with, we must fall back upon the ancient educational practice of setting up our objectives and this must be done not only for the sciences but also for the whole of secondary education. Taking the latter first, we refer to the Preliminary Report of the Science Committee to the Commission on Secondary School Curriculum of the Progressive Education Association where we find that the aim of general education "is to promote the continuous reconstruction, improvement, and enrichment of individual and social life through the orientation of the individual in the basic relationships of living."

If this statement of the aim of general education is accepted, then we must ask ourselves questions concerning the function of science teaching in this comprehensive program. We can no longer assume that the mere memorization of a mass of factual information, however well organized, will make a significant contribution to the development of the child in terms of the basic relationships as set up; neither can we argue that the actual mastery of a series of generalizations, however significant to the field of a specialized science will, *per se*, further that development. Oxidation and reduction, Boyle's and Charles' laws, Avogadro's hypothesis and a host of other familiar topics of traditional science have not, in themselves, the power to exercise much influence on the continuous reconstruction and improvement of individual and social life.

It is our firm belief that there are within the range of the common, everyday experiences of the boy or the girl of today sufficient important and vital applications of science to build around

them a course in physical sciences which will not only give them the basic understandings and concepts of science but which will, in addition, materially aid their orientation with respect to modern life. That such a course will develop the same habits of superficiality and intellectual arrogance mentioned earlier in this article is denied because the proposed course would be dealing with familiar materials, not post-graduate theories in atomic physics. It would be definitely understood that the course was being offered not in any attempt to teach science as such but rather in an effort to make the influences of science more intelligible; to make the contributions of science to daily life a bit more meaningful and less mysterious.

What should a properly organized science course accomplish if it were deliberately planned and constructed in terms of the statement of the aim of general education already given? It could make science a real and living force instead of a mysterious and misunderstood catchword for advertising writers and vendors of cheap mouth-washes; it could interpret the world of the student to the student; it could contribute to his intellectual interest in things round about him; it could improve his method of thinking and increase his ability to cope with the many problems which surround each of us; it could quicken his sense of social responsibility and enhance his appreciation of the economic and industrial elements which so largely color our present culture.

At the Francis W. Parker School there is being developed a two year sequence in the eleventh and twelfth years which deals with the physical sciences in a functional manner. The course is called "The Contributions of Science to Our Life Today" and the entire emphasis of the course is placed upon those specific goals contained in the aim of general education as already given . . . "the continuous reconstruction, improvement and enrichment of individual and social

life through the orientation of the individual in the basic relationships of living." The course as now set up comprises some eighteen units of work divided into four sections. The outline follows:

Part I

1. Introduction: Aims, purposes, procedures and general scope of the course presented to the group in informal discussion fashion.
2. Measurement—a fundamental tool of science.
3. The Kinetic-Molecular Theory of Matter—a basic theory of science.
4. Water—a necessity of life and a substance of great value to science.
5. The atmosphere and its relations to life and to science.

Part II

6. The automobile as a machine.
7. The electric refrigerator.
8. Musical instruments.
9. Geometric optics and illumination.
10. The electrical system of the automobile.

Part III

11. How metals are made available for our use and their importance to us.
12. How a metropolitan city disposes of its wastes.
13. How we use some of our natural resources for producing heat, light and mechanical energy.
14. Taking nitrogen from the atmosphere.
15. The personal significance and the industrial importance of nitric and sulfuric acid.
16. Making and using soaps and cleansers.

Part IV

17. Alchemy—old and new.
18. Science and philosophy.

For each of the units in the course specific objectives have been set up. Some of them are concerned with basic concepts necessary to the understanding of the materials which are within the unit itself while a few of them do anticipate work which is to come but are

included because of their very close relationship to the work of the moment. Many of them are directly and specifically involved in the social significance of the materials being studied. For each of the objectives selected there are being collected and devised activities through which the objective can be realized and in connection with which the content materials of the unit are partly chosen. Methods of testing for the realization of the objectives in terms of their actual functioning or in terms of responses conditioned by the assimilation of the central idea are to be developed as rapidly as possible.

One unit may be considered here to illustrate the nature of the course. In the unit on metals¹, how they are made available for our use and their importance to us, there are three specific objectives: 1. to produce certain definite understandings of chemistry related primarily to metals; 2. to introduce, and in certain cases to develop, such basic concepts and techniques common to all chemistry as may be naturally associated with the content of the units; and 3. to clarify and emphasize some of the major social implication of metals.

In this unit the definite content materials to be included under each objective have been specifically stated. A few of those for objective one are: *a.* most metals combine readily with such other elements as oxygen and sulphur (found free in nature in large quantities) to form insoluble compounds and for that reason are themselves seldom found free in nature; *b.* to produce pure metals, uncombined with any other element, it is usually necessary to provide some substance which will have a greater chemical attraction for the oxygen or sulphur than does the metal. The temperature must also be raised to the point where a reaction will take place; *c.* metals may be melted together to

form mixtures known as *alloys*. Alloys frequently have properties strikingly different from any of their constituent elements.

For the first objective of the unit such activities as the following are suggested: *a.* Place a piece of iron on the window sill or leave it on the ground for several days. Compare with the original substance. *b.* Leave a sterling silver spoon in a raw egg over night. Wrap a rubber band around a silver dollar and leave it for a day. *c.* Make a list of metals which rust, corrode or tarnish easily, those that do not. *d.* Report on any experience with artesian wells which contained iron, sulphur, etc.

In connection with the second objective of this unit, many basic concepts are brought in to explain the materials being studied or because they may be obviously inferred from the experiences and observations which take place. Thus, oxidation and reduction are as well and as easily taught in connection with metals which are familiar and well known as is possible by means of the traditional approach through oxygen and hydrogen gases. The molecular concept of matter is a natural explanation of the way in which the chemical changes involved have occurred, while the whole matter of mixtures and compounds, elements and compounds, etc., can be quickly taken care of in a truly functional manner.

The third objective, having to do with the social implications has unlimited possibilities. The content materials there are illustrated by the following few examples: *a.* The development of labor unions and their position and operation with the various phases of the metal industries; *b.* Old age and unemployment insurance in the metal industries; *c.* Safety hazards and their control. (This last is always brought sharply to the consciousness of the pupils when the field trip to a steel mill takes place, as large contest boards, safety flags, innumerable signs, etc., abound throughout the

¹ A copy of this unit may be secured by writing to the author.

plant); *d.* The development of large cities about producing areas or consuming centers; *e.* Metals as articles of world trade; *f.* Metals and other natural resources such as petroleum, as an impetus to colonization and national aggressiveness.

Activities in this particular phase of the work are carried out in connection with the social studies classes and include such examples as the following: *a.* Formulate a code for labor-employer relations which might be an ideal or a model. Criticize from the standpoint of both labor and capital; *b.* Collect and organize data on wage scales, working hours, etc., for a typical steel mill in the Chicago area; *c.* Cite laws now in effect which attempt to conserve our natural resources. Make desirable additions to this list, if possible; *d.* On a map of the world draw lines connecting a picture of an automobile with places throughout the world from which metals have been

brought to be used in the car. Indicate the names of the metals and where they are used in the car; *e.* Consider the world effect of eliminating machine production and of largely returning to hand labor.

In the limited space at our disposal we have attempted to set up the background for the course which has been discussed and then to describe it in as much detail as possible, illustrating the description with such examples as seemed to give greatest clarity to the picture as a whole. No mention has been made of the method of presentation as that is a matter too largely dependent upon the personality of the teacher, upon the equipment available, and upon the general philosophy of the school in which the course is being given to make it very worth while describing. It is not the method which is important here but rather the purpose for which the course is taught.



WHAT LEARNINGS ARE OF MOST WORTH? THE ANSWER LIES IN ANALYSIS

By DAVID SNEDDEN, Palo Alto, California

Learnings can be broken down into constituent elements. The above is the central problem of all philosophizings underlying the provision and operation of schools. Obviously it will be the central problem of the educational sciences which we hope presently to evolve. Learnings, like plants, ores and other complexes in nature, are usually capable of analysis into constituent elements. Or they can profitably be considered as individuals, species, genera, families, etc. Large proportions of the over-sentimentalized and futile exploring pedagogies of our day refuse or fail to face the realities of *learnings*—and especially of tangible, more or less visible learnings—

as the basic *stuffs* of all purposive educative and many naturalistic growth processes. (Hence in times of emotional transition and unsettlement in education, as in contemporary politics, the large numbers who "go whoring after visions over-wise or over-stale" in Kipling's phrase, that is, become romantics and panacea addicts.)

Learnings will be classified by scientific procedures. Learnings, as the primary products of educative processes, will eventually be classified and measured by scientific procedures just as certainly as are now classified and measured stars and molecules, trees and bacteria, movements of electricity and transmutations

through radium. Learnings, thus classified and measured, will also eventually have their probable functionings and values for the welfares of particular persons or societies of persons determined and controlled through scientific procedures just as certainly as are now the probable functionings and values of therapeutic drugs, soil fertilizing agents, dietary compounds, electrical appliances, means of water transport and mechanisms of automobile movement similarly determined.

Learnings will be classified according to functions, not subjects. Many tentative plans for differentiating and classifying learnings—as of medicines or foods or fertilizers or seed, or machines or buildings or literature and other aesthetic arts—will doubtless presently be evolved. But policy-making educators will probably find that for their “applied-science” purposes classifications based on highly probable functionings and proven values of such functionings will prove the most valuable. (Occasionally, of course, classifications based on social inheritance “subjects” — e.g., handwriting, spelling, malaria prevention — may considerably coincide with functional classifications; but under many conditions, e.g., social studies in

imagined relationship to civil educations or algebra in relation to disciplined reasoning powers there will be found no connections.)

Learnings must be differentiated. Back of measurement of learnings must be realistic estimates of *functional differentiations*. Some learnings, and some learnings only, for most persons will function only toward higher vocational competencies. Only some carefully chosen learnings will prove functional toward producing the higher kinetic civic behaviors so wished for in our day. And it should be obvious that current explorations after “integration,” “core subjects,” and other similar syntheses are miring us still more deeply into the quicksands so long as we have not clearly *valued* the components which we seek to integrate—as was clearly the case in the Herbartian efforts to make geography “the head of the table” in correlation, or Dewey and Doff’s wishes to give primacy to the industrial arts or current rationalizings about the “social studies” as “core subject.” In fact, for purposes of scientifically valuing learnings, just the opposite procedures are essential—always analysis and still more analysis as is shown by all the other pure and applied sciences.

WHAT LEARNINGS ARE OF MOST WORTH? THE ANSWER LIES IN SYNTHESIS

By GOODWIN WATSON, Teachers College, Columbia University

Learning cannot be broken down into constituent elements. When an organism responds to a variety of more or less simultaneous stimuli the response is not made up of elemental reactions, each in one-to-one correspondence with a single stimulus, but the response is integral. It is influenced by each of the shades of difference in the situation but it still remains a unit. The various concurrent stimuli blend and fuse and run together

into a unique meaning from which a congruent and similarly unique response emerges. We may focus attention upon one aspect of the learning or another, but we must guard against the error of supposing that these aspects lead any independent existence. Because we can name parts of the response (motor, ideational, affective, verbal, social, etc.) these must not be imagined as distinct and detachable elements. Change any

one of them and you will probably produce alteration in all the other parts of the whole.

That learning is of most worth which keeps its functional unity. All the stuff of life is potentially educative. Since we can't teach everything at once, some selection is made. Commonly this is done along subject-matter lines. One trouble with subject-matter units for learning and teaching is that they, in contrast to the phrase of the marriage ceremony, put asunder what God hath joined together. The child who learns to improve his diet learns something which holds together in a natural way. In the curricula of yesterday, this natural unity would have been all pulled apart. Some of the learning would have been considered reading. Some would have been number work. Some would rate as physiology. Some would come in as chemistry. And some very real and important considerations like educating the child's mother and adjusting to the family economic limitations might never have come in at all, because they were

not in the "subject" offering. The separated fragments learned would have been of little value because they could not operate together in an improved way of living.

Illuminating ideas usually arise from synthesis. There is a familiar observation that the most fertile soil on the abandoned farms is along the hedge-rows, between the traditional fields. Where fields of knowledge join and overlap, there are often very rewarding discoveries. Consider the interesting possibilities in a synthesis of economics and psychology; geography and health; astronomy and art; or, to turn to more functional units, child care and furniture design. Teachers can bring to pupils the most exciting and challenging intellectual experiences by helping the children to put together in one new, unified and creative response, two ideas not hitherto related in the thinking of these youngsters. A good example from the field of teacher-education might be the synthesis of the study of Fascism and of school administration.



SHORT ARTICLES

BUILDING A COURSE IN RETAIL SELLING

By HOWARD STEWART

Champaign, Illinois, Senior High School

Two commercial curricula are being offered to high school students in Champaign, Illinois. For several years this school has recognized the need for providing sufficient vocational education, as well as adequate social training, for the large per cent of its graduates who do not plan to attend the University of Illinois, located in this community, or any other institution of higher learning. Until this year the only attempt made by the commercial department to help meet this need has been to offer, as pure electives, the varied but traditional subjects of typewriting, shorthand, bookkeeping, commercial law, general salesmanship, commercial arithmetic, business English, and commercial geography. Some students were prepared for secretarial positions by this means, but not enough vocational training in the commercial fields was provided.

As it has been very obvious that the local retail merchants have been employing not only high school graduates, but in many cases juniors and seniors, for after-school and Saturday work, the decision to offer training in retail selling and related subjects seemed a natural solution to at least a part of the problem. Interviews with several of the local business men substantiated this belief.

To overcome the faults of arbitrarily setting up a retailing curriculum it was first necessary to know the type of student that would benefit by such training. It was learned that such a curriculum should meet the needs of two groups of students: 1. the first group is composed of persons who, because of financial conditions, or for any other reason, would be unable to attend an institution of

higher learning, and for this reason desire a vocational training in commercial subjects; 2. the second group is composed of persons who plan to enter the retailing field for their life work; who are hoping to obtain in high school a systematic training in both the science and art of selling, and at the same time planning to continue their education in some college or university.

To meet the needs of the above mentioned groups of students, the following objectives were accepted as being the most adequate for this community: 1. to develop social intelligence through classroom theory and practical experience, as found in part-time work; 2. to develop an understanding of the basic principles and practices in the business of retailing; 3. to build a foundation for further study of commerce in general, and retailing in particular; 4. to teach a general, yet practical, view of retail store organization and management; 5. to enable graduates of the retailing course to adapt themselves to related fields of employment; 6. to help students to consider intelligently the opportunities for life employment as found in the business world, and 7. to train pupils so they will fit into retail work in this city.

At the same time that it is universally agreed to be very unwise to install a curriculum in a school in one community merely because that curriculum has been successful in another city, it is likewise just as true that helpful suggestions may be received from that other. It was with this latter thought in mind that the programs of study of the few secondary institutions known to be pioneering in this phase of vocational training were gathered with the opinions of the frontier thinkers in the field. A thorough study of the information gathered led

to the belief that the single semester subjects of textiles, a recommended elective at the present time, marketing economics, advertising, business letter writing, business law, store organization and management, and the full year subject of cooperative retail selling, meeting three hours daily, would most adequately fulfill the objectives previously set up. As a result the above mentioned subjects comprise the commerce offering in the vocational field of retailing in the Champaign Senior High School.

The social training of these vocationally inclined students will not be neglected, as they are required to continue three years study of English with an additional course in speech, a semester of social science, a year of United States history, and a semester of economics, sociology, and American government. It is further believed that the many weeks of cooperative training will aid greatly in the socializing of these students, as they will be in direct contact with other citizens of the community before they completely leave the influence of the school.

The plan being followed enables students to attend the retail selling class or to report to the local business institutions during the afternoons for alternate two-week periods. On approximately November 15, for the first time, through the cooperation of the merchants of this community, the students entered the local stores as apprentice sales people. After a two-week period of practical experience the students reported to the classroom for further instruction and a review of their experiences of the previous two weeks. The periodic weeks of store experience continued throughout the remainder of the year with the additional advantage of excused absence from all school work for the period just preceding the Christmas holidays. It may be well to add here that, except for that period, the apprentices will not be paid for their services, and for this reason will report to the

business men only during school hours, namely, noon until three o'clock, except in some unusual cases when they will continue until four o'clock.

That the school has the complete cooperation of the majority of the merchants in the city is indicated in their offering of Saturday work with pay, to the students of the merchandising curriculum, and future full-time work to those who prove they have benefited by their training and apprenticeship. The merchandising or retail selling curriculum is expected to provide a means of entrance into the business world for the student who is interested in it and who cannot enter some college or university.



THE OREGON PLAN OF CURRICULUM DEVELOPMENT

By HARRY B. JOHNSON
Eugene High School, Eugene, Oregon

After studying procedures of other states that have undertaken curriculum programs, a plan has evolved that will include numbers of teachers and administrators organized in committees. If the study shall include a large number of people then the work must be broken up into very definite units so that duplication will be avoided. Also, if there shall be unity throughout, the committees must be interlocked.

At the time the curriculum study was first planned a central curriculum committee was set up as the executive group with five regional vice chairmen, thus dividing the state into five districts. The plans were laid in consultation with the State Superintendent, C. A. Howard, and his department has been actively interested and a participant in the work of the committee. Thus, a unity is planned in that respect also with the intent that as the program progresses the State Department will be enabled to take over certain phases in building a unified curriculum for the state.

The plan adopted designates seven types of functions:

1. The Oregon State Teachers' Association Curriculum Committee. This committee will direct the program, keep it moving and unified. It will organize the body of teachers in a state-wide study of the curriculum, organize state committees, require reports of progress of all committee chairmen, provide assistance for regions in developing organizations, assemble materials from committees, and supervise unifying and editing of such materials.

2. Principles and Procedures Committee. In a program of curriculum reorganization where numerous elements are at work on the various aspects, unifying principles are required to prevent conflict in philosophy and procedures. Most curriculum programs endeavor to bring about consistency by setting forth a statement or platform of basic principles. These principles are usually stated in the form of generalizations of basic concepts accepted by all those engaged in education.

In brief, the Principles and Procedures Committee will state the principles to be observed in developing the curriculum in Oregon; suggest desirable curriculum procedures; encourage desirable uniformity; define terms.

3. Aims Committee. If the program of curriculum reorganization shall go forward with a unified purpose there must be set forth certain aims of education. Thus, it will be the duty of the Aims Committee to formulate the general aims which, at present, appear to be the most desirable goals for the public schools of Oregon.

4. Unifying Committee. This committee will deal with what has been termed the scope of the curriculum. It will plan unity between fields, grades and subdivisions, consider problems of articulation, of placement of materials with due regard for all factors. Together with the Principles and Procedures and Aims Committee it will de-

termine the fields of learning or areas of experience to be included in the curriculum of the state.

5. Regional Vice Chairmen. Five regions have been created, each to be in charge of a vice chairman who will organize curriculum study groups; organize Regional Production Committees in fields designated by the Unifying Committee; act as the representative of the Curriculum Committee in the particular region.

6. Regional Production Committees will undertake the particular steps outlined by the vice chairmen in their respective fields. They will assign to local production committees specific phases of curriculum work which, when unified, will provide the basis for a complete course of study in a particular field.

7. Local Production Committees will work on a phase of Curriculum assigned by Regional Production Committees.

In a state such as ours, where financial aid for curriculum construction is not available, expert guidance by curriculum specialists will not be possible. The State Department of Education will be called upon, and as the work progresses, may take over certain phases. The various teacher training centers have always stood ready to assist in the betterment of school procedures and they will undoubtedly lend expert counsel in such studies as are made.

In this connection it has been suggested that curriculum centers be established at the various schools of higher education to serve the respective sections of the state. At these centers it would be possible to concentrate materials for the use of state, regional, and local committees. This service may even be extended to extension and to summer school courses.

Under this plan the state-wide program will proceed at once with a very active study of curriculum problems in order to gain a perspective and a background for the more practical duties to

come. In the meantime, the Principles and Procedures, the Aims and the Unifying Committees will be preparing reports. Upon the completion of their work active production of unified courses should commence in earnest.

Upon the preliminary committee reports will rest the responsibility for developing a philosophy and procedures. Upon the vice chairmen will rest the responsibility of organizing the respective sections of the state into active study groups, and upon them will rest, too, the responsibility of seeking out the most capable teachers to work on the production of materials during the later phase of the program.

AN EVALUATION OF THE ARKANSAS CURRICULUM PROGRAM TO DATE

By RALPH B. JONES
Fort Smith, Arkansas, Public Schools

It is recognized that many values have been derived from participation in the Arkansas Cooperative Program to Improve Instruction during the past three years. The first year of study was particularly helpful in stimulating teachers to read widely in the fields of socioeconomics, educational philosophy, and the newer methodology. While it is true that progressive teachers have always been sensitive to many of the problems emphasized in this program, there is indisputable evidence that a much greater number of teachers than ever before have been sensitized to the necessity of relating the life of the school more effectively to life outside the school. The impetus given to study and a critical attitude toward the work of the school has carried over through the succeeding years and still prevails with practically all of the teachers. It is a definite part of the plan to keep this spirit alive as a prime factor in good teaching. Teachers are being encouraged by every legitimate means to remain constantly alert to

advantages and disadvantages of old materials and procedures as well as new.

During the second year many teachers experimented with the unit as a type of organization of instructional materials. No effort was made to make this type of organization apply in all school situations, but teachers were encouraged to try the materials and to report the results for careful analysis. All units taught were reported and filed for reference in the professional library. A number of the best ones were reproduced in mimeograph form and bound copies were made available to all teachers who wanted them. This and other factors evolving from the second year's program led to a considerable extension of unit materials and procedures during the third year. In the primary grades practically all teachers in the system used the unit organization last year. In the intermediate grades which are organized on the platoon plan, the teachers of the "traditional" or "regular" subjects taught two groups of pupils for a half-day session to each group and assumed the major responsibility of planning and developing the units of work with close coordination of the materials and activities in the special classes of art, music, library, science, auditorium, and physical education. In the junior high and the senior high there has been continual experiment with the unit type of organization in practically all departments. In addition, the teachers in these two levels have studied carefully the possibilities of closer coordination of the various courses and have made noticeable progress in the effort to relate the segments of school life to each other and to the needs of the adolescent youth.

Aside from these more or less tangible outcomes of the local program or perhaps one should say accompanying them, there has been a very definite shift of viewpoint on the part of all teachers with respect to the place and function of subject-matter in the whole scheme of education. The notion that certain

subject-matter has value *per se* has been definitely abandoned. Teachers of the most formal and traditional subjects are defending them, rightly or not, upon their contribution to the development of the child. History, for example, is no longer justified by reference to what some historian may think of its value, but rather the attempt is made to justify it on the grounds of what it does to the child. This viewpoint puts the child in the center and adapts the subject-matter to his needs instead of attempting to force the child into a predetermined subject-matter pattern. The change in viewpoint is fundamentally important.

The development of the program during the last three years has revealed at least two distinct needs. The first has to do with materials of instruction, and has been very adequately met. As soon as teachers began to organize their instructional materials into units of work the need for a greater wealth and variety of materials became urgent. The need has been met by instituting a long-time program of library expansion which is effective for the whole system from the first grade classroom to the teachers' professional library. A definite annual appropriation on a *per capita* basis in the elementary schools has laid the foundation for library books for young children which are on a par with the library materials formerly available for high school students only. The establishing of a central library and reading room for teachers has been helpful in providing suitable reference materials for the teachers.

The second need has to do with procedures and constitutes the major point of attack for the coming year. Until now the materials for the development of units have been selected more or less at random, the teacher being guided by the general frame of reference as outlined in the various state bulletins. Little has been done toward a systematic selection of materials that seem to be specifically suited to the needs of the local

system. Teachers have frequently expressed a firm conviction that there is need for more definite guidance in the selection and use of the suggestive materials which have been developed in the State program. That these materials possess sufficient variety and flexibility to permit and encourage such adaptations cannot be questioned; nor is there any doubt as to the possibility of making the necessary adaptations without destroying the original pattern.

A CLOSE-UP OF THE PEABODY CURRICULUM LABORATORY

By MARGARET BROWNE
Parkdale School, Topeka, Kansas

The Kansas Committee found the Peabody Curriculum Laboratory well equipped for work with a director in charge and everything at hand to make working conditions pleasant. Across the hall from the Laboratory, the student found a well-equipped library for the exclusive use of the laboratory workers, and an efficient librarian in charge. Each day for one hour the Kansas group met with their director, Miss Dale Zeller, for discussion, planning and clarification of obscure points. After the scope of the work was agreed upon and bulletins of states that had completed their preliminary studies had been read, the tentative plan of the Kansas bulletin was outlined, headings of chapters to cover sketchily the work of the first year were chosen. Members of the group selected the phases most familiar to them and the real work began.

As the writing progressed each part was presented to the group, discussed freely, revised and rewritten. It was not our intent to produce a text to be followed page by page, but rather to produce suggestive sheets to point the way to self-surveys of the educational needs in individual communities and the state at large. The improvement of instruction must begin with a realization of

what needs to be improved, hence the need for surveys.

The friendly contacts with committees from other states proved illuminating. All groups discussed their problems freely, the difficulties encountered, the successes achieved and the unfolding of the work. The thrill from the realization that earnest workers in many parts of the United States were engaged in the same problems kept the Kansas committee pushing on at the most discouraging points. And there were discouraging times. A little excursion into the Cumberland foothills or a movie or a good dinner somewhere cleared away the fog and brought the Kansans back to their desks remembering that six weeks were all too short for such a comprehensive task.

Five phases outside of the laboratory, but of vital importance in the preparation of the bulletin, were:

1. Two important conferences, one early in the session, the other at the end of six weeks. At the Administrators' Conference that lasted two days the theme was *Instruction as the Administrator Sees It*. This was a real school of experience; actual problems were discussed informally with such interest that it was hard to dismiss the sessions. To the second, the Teacher-Training Conference, came representative groups from most of the states: heads of state departments, teacher-training instructors from state schools, city superintendents and many other groups attracted by the speakers and the theme of the conference.

2. Dr. H. L. Caswell lectured three times a week. At this hour he developed further the theme of Caswell and Campbell's *Curriculum Development* and discussed at length the basic concepts on which the improvement of instruction must stand.

3. Thursday of each week the entire period was given over to questions and points of disagreement presented by the students. These points were cleared up

by members of the class or by Dr. H. L. Caswell.

4. On Friday of each week a panel discussion contrasted sharply today's procedure with what the group conceived the future teaching should be.

5. Group discussions under the trees on the campus, under leaders who were appointed, who chose a dozen or less members of the class from different states, and from various teaching groups. These meetings were wholly informal and carried out programs that suited members individually. Sometimes they were devoted to reports of recent magazine articles, sometimes to formulation of questions for the Thursday period, sometimes to frank discussion of state problems.

And so, in every way possible, an exchange of ideas was fostered; state groups were broken up and friendships were made. The movement is not for the improvement of instruction in Kansas alone, but the improvement of instruction in the schools of the United States.

THE INLAND EMPIRE CURRICULUM SOCIETY

By EDGAR M. DRAPER
Executive Secretary

Through the initial efforts of Dr. Ralph D. Russell, of the University of Idaho, and Dr. Edgar M. Draper, of the University of Washington, the members of the Society for Curriculum Study met several times during the Inland Empire program at Spokane in the spring of 1936 for the purpose of organizing an Inland Empire Curriculum Society which would be a regional group meeting under the auspices of the National Society. Others participating in these preliminary meetings were Dr. Frank Parr, Oregon State College; D. A. Emerson, Oregon State Department of Education; W. W. Gartin, Idaho State Department of Education; James Ham-

ilton, Reed College; J. T. Longfellow, Superintendent of Schools, Oregon City, Oregon; and Harold Barto, State Normal School, Ellensburg, Washington.

A definite organization was developed at Spokane, which included an executive board composed of two representatives from each of the five states in the Inland Empire. These states are Utah, Idaho, Montana, Oregon, and Washington. Dr. W. E. Armstrong of Salt Lake City was named chairman of the executive board, Dr. Edgar M. Draper of the University of Washington was named executive secretary and *ex officio* member of the executive board, and Dr. Ralph D. Russell of the University of Idaho, who is chairman of the committee on regional meetings of the National Society, was made an *ex officio* member of the executive board. The Executive board at the present time is made up of the following curriculum workers from the various states:

Washington—C. Paine Shangle, Superintendent of Schools, Bellingham; L. O. Swenson, State Department of Education, Olympia.

Oregon—John Parr, Oregon State College, Corvallis; D. A. Emerson, State Department of Education.

Montana—Wayman G. Williams, Curriculum Director, State Department of Education, Helena; O. H. Campbell, Superintendent of Schools, Manhattan.

Idaho—W. D. Vincent, Superintendent of Schools, Boise; W. W. Gartin, State Department of Education, Boise.

Utah—W. L. Wahlquist, University of Utah, Salt Lake City; W. E. Armstrong, Salt Lake City Schools.

The first meeting of the executive board of the Inland Empire Curriculum Society was held at the Crystal Lounge of the Hotel Boise, Boise, Idaho, on October 27 and 28, 1936. This meeting was for the purpose of completing the organization of the Inland Empire Society and the development of a pro-

gram for the five Northwestern states. The meeting was held in connection with a state curriculum program in Idaho and the members of the executive board had the opportunity of participating in the Idaho meeting prior to the meeting of the executive board. In view of the success of this meeting, it was decided to hold a fall meeting of the executive board each year in cooperation with the state curriculum program in one of the states making up the Inland Empire. The State of Oregon invited the executive board to meet with the state curriculum committee in the fall of 1937 and the State of Washington also indicated that it will invite the executive board for the fall meeting of 1938. Of course, the executive board and the members of the Inland Empire Curriculum Society have a regular program in connection with the Inland Empire meetings at Spokane in the spring.

Every one in the Inland Empire who is a member of the National Society may become a member of the Inland Empire Society. The executive secretary has already requested the executive board of the National Society to permit the Inland Empire Society to retain a part of the national dues of its members so that the publication of materials and the mailing of these materials to the members of the Inland Empire Society can be provided for in the future. At the present time the Curriculum Laboratory at the University of Washington is to take care of this service for the members of the Inland Empire Society.

The Inland Empire Curriculum Society was organized as a clearing house for all individuals in schools in that area who were doing curriculum work. Its immediate goals included: 1. the compilation and publication of a bibliography for state and local groups; 2. the development of a statement of basic principles in curriculum building; 3. the determination of scope and sequence in curriculum work; and 4. a study of the relationship existing be-

tween the school and the community. Two meetings will be held at Spokane in the spring. The first will be a dinner meeting at which progress can be reported from the various states. The second will be general meeting at which basic curriculum problems will be discussed.

THE BIRMINGHAM PROGRAM TO IMPROVE INSTRUCTION

By I. R. OBENCHAIN

Director of Curriculum, Birmingham, Alabama,
Public Schools

The present Birmingham Curriculum Program was initiated in August, 1935, for the purpose of improving instruction in both elementary and high school areas. The program as planned will extend over a period of several years and will involve the following major points: the study of society; child development; principles of education; and the accompanying implications for curriculum reconstruction; the collection, organization, and evaluation of new instructional materials and procedures resulting from extensive exploratory work by teachers, principals, and supervisors; the systematic try-out of the new instructional materials and procedures; a continuation of exploration, trial, and evaluation, and a further revision of materials and procedures resulting ultimately in the publication of a tentative course of study.

The first year has been devoted to a preliminary study of the needs of society, child development, and the principles of education, as a basis for curriculum reconstruction. The study has been carried on in the monthly meetings of teachers, principals, and supervisors, and the weekly teachers' meetings in each school.

In an effort to determine society's needs the following major social functions were selected for study and surveying: Conserving and Improving Human and Material Resources; Earning a Living; Making a Home;

Providing for Transportation and Communication; Expressing Religious Impulses; Performing the Responsibilities of Citizenship; Expressing Aesthetic Impulses.

Each of these major social functions was assigned to a committee with suggestion that it be studied from four different angles: What Is, What Was, What Should Be, and How to Attain What Should Be (with implications for the curriculum). It was pointed out that the study of What Is involved the use of surveys.

Each social function committee was composed of a chairman and several members who were either principals of schools or supervisors. Each principal member was the chairman of a subcommittee whose membership consists of all of the teachers under his supervision. In this way all teachers, principals, and supervisors in the system were brought into the study. More than one-half of all of the building meetings were scheduled for the study of social functions.

The result of the first year's study are now being compiled and edited preparatory to publication as a bulletin which will contain nine sections, each of which is developed according to the following outline: existing conditions; needs; recommendations for Birmingham schools; leads to units of work; suggested readings.

The study is obviously incomplete. Many aspects of the social functions were not surveyed or were inadequately surveyed. Furthermore, the report is incomplete because of the necessity of eliminating some contributions and abbreviating others. It is expected, however, that this year's activity will lead to further activity on the part of the teachers and that unsurveyed or inadequately surveyed areas will be given attention. The report is to be used as a basis of study in building meetings, in grade meetings, and in individual study. It is hoped that it will give the teacher a starting point for the development of

units of work around crucial social problems.

CONTRIBUTION OF CHEMISTRY TO AN INTEGRATED CURRICULUM

By A. V. OVERN
University of North Dakota

"Curriculum reorganization implies the selection of instructional materials that are appropriate to the philosophy on which the reorganization is based." So states Klovstad in a study designed to discover just what chemistry materials the integrated curriculum demands and to suggest the materials which chemistry can most conveniently contribute to it.¹

The investigator suggests that teachers of high school chemistry should harmonize their practices with the newer concept of integration. Since the aim of the new high school is to provide an environment appropriate to the needs of every pupil for his normal life activities, the curriculum should be composed of a sampling of all activities and materials involved in living. Moreover, the broad social purpose of chemistry is to give the pupils an appreciation of what the development of this field means in modern social, industrial, and national life. Therefore, the place of chemistry and of every other type of material in the new school depends upon its use in our contemporary civilization. Chemistry as an organized course contains many materials which the chemist has found necessary in his work of adding to the stock of useful knowledge through research. It is of a specialized type which is not particularly usable by the new high school in building and disseminating the common culture. The course should therefore be changed to contain a major-

ity of such chemistry materials as people use to advantage in their everyday living.

Since the laboratory apparatus used in high school is designed particularly for illustrating the facts and principles developed in the textbook, it is probably as suitable for the new high school as for the traditional. The textbook materials, on the other hand, have probably been too much standardized by such agencies as the College Entrance Board or the Committee on Education of the American Chemical Society. The first of these agencies has been interested chiefly in selecting students and the second in the task of relating the chemistry courses taught in high school to those taught in college.

A more recent distinction has been drawn between the chemistry to be studied by those (1) who do not plan to attend college and (2) who intend to go to college. It may be that no such distinction is justified but that all should be offered the materials thought proper for those who do not plan to enter college, because those materials are the most related to life's activities. There is little foundation for the belief that a specialized type of high school chemistry is any better than a nonspecialized type in preparing students to enter college chemistry. If the contents of courses are judged by textbooks, Klovstad found comparatively little in any high school course to assist the average pupil to perform his normal life activities.

He then pointed to certain activities, concepts, and materials in chemistry which are so closely related to the activities of living that the two can be integrated. He selected a few such materials and showed the areas wherein the integration could be made. In conclusion it was pointed out that the successful teaching of chemistry in accordance with the ideals of the new high school probably is dependent largely upon the teacher's well-formed concept of the possible integration of each pupil's curriculum with his life activities. The

¹ G. S. KLOVSTAD, *The Chemistry Subject Matter for Integrated Curriculums*, Unpublished Master's Thesis, University of North Dakota Library (May, 1936).

teacher should recognize the many ways in which chemistry touches the lives of people and should realize that such a relationship between the materials of chemistry and living is the only justification for their inclusion in the high school program of work. Each pupil needs those chemistry materials in his curriculum which will enable him to perform better many of his activities. Textbooks in chemistry at present are

not the best sources for such materials. "More desirable types have been assembled by science writers in works which present the relationship and importance of chemistry to man and his activities and magazines which suggest laboratory exercises arising from life situations." The investigator lists sources which contain concepts and materials of chemistry regarded as essential to worth while instruction in the new high school.

CURRICULUM RESEARCH

MACOMBER, FREEMAN G.—*A Placement Study in Secondary Economics*. California: Stanford University. 1936.

In recognition of lack of evidence on placement of curriculum materials, this study was undertaken to determine the degree of understanding attainable by high school juniors and seniors of certain important economic problems. Price, money, and banking were selected as subjects of experimental units which were taught to more than 200 students in high schools and 87 students in college. Objective tests were constructed to measure understanding of phases of the units, rather than general achievement. Test questions were, on the whole, in problem form requiring the application of understandings.

Arbitrary standards of achievement were established on the basis of the assumptions that: (1) if a majority of students made scores of 75 per cent or more on a test in a given area, after the tests had been corrected for guessing, the concepts in the unit were within the understanding of the group; (2) if a majority of students made scores of 50 per cent or more, but less than 75 per cent, the concepts were considered to be doubtful for the group; (3) if a majority of pupils made scores of less than 50 per cent, the concepts were considered too difficult for that group.

Students were grouped on the basis of scores on the *Terman Group Test of Mental Ability*, Group I including the upper 25 per cent, Group II the middle 50 per cent, and Group III the lower 25 per cent. Group III ranged in IQ from 76 to 100, Group II from 100 to 114, and Group I, 115 or above. The 87 college students were divided into three groups on the basis of percentile standings on the *Thurstone Psychological Examinations*. All groups were tested before and after the period of instruction. Approximately 40 clock hours were devoted in each class to teaching and testing the experimental units, a longer time than usually possible in a semester course in high school economics.

In general, concepts of price, money, and banking in these units were too difficult for the high school students of Group III, and for large numbers in Group II. In a majority of the tests, Group I pupils made higher scores in the pre-test than Group II made in the final test. Thus the advisability of attempting to teach economics to any but students of better than average ability without modifications of content, procedures, and time allotments, is doubtful.

Overlapping of economics test scores between Groups I and II, and II and III, shows intelligence test scores to be an inadequate basis for grouping stu-

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dents in economics courses. There was some overlapping between Groups I and III. Overlapping was greater between the groups of college students than between groups of high school students.

Pupils in Group I were able to master most of the concepts studied, except that indications were that time for study should be lengthened for adequate mastery of some of the concepts, particularly those in the banking unit.

Group I high school students proved as capable as Group I college students. Group III college students did much better than Group III high school students. Neither college nor high school students of Group III, however, demonstrated ability to understand the economic concepts involved in this study.

These results raise doubt as to the possibility of developing in a majority of high school students understandings of the more important economic, social, and political problems without fundamental curriculum changes. Most of the economic concepts of these units are too difficult for any but the higher-ability students in either high school or lower-division college classes with present teaching procedures and time allotments. Doubt is raised as to the ability of the average citizen to vote intelligently on complex governmental problems. While this study does not prove conclusively such inability, it does indicate that present educational procedures are not developing understandings of major economic issues. Experimental studies are needed of ability of adults to understand such problems.—J. E. D.

LYON, MARGARET CHARTERS — *The Selection of Books for Adult Study Groups*. New York: Bureau of Publications, Teachers College, Columbia University. 1936.

In preparing and selecting reading materials for adult study groups and adult education programs, a number of questions confront the serious worker.

How much historical allusion should be used? How many figures should be included? How difficult should the words and sentences be? These are questions over which he must ponder at one time or another. Then, there are the persistent problems: What kind of material do adults like? How should the material be presented to capture their attention most effectively? How important are literary techniques? These are some of the questions that this book attempts to answer experimentally. More generally, the study reported in this book is an attempt to determine the methods of selecting and preparing expository materials that most effectively reach the attention and interest of the adult.

The first three chapters of the book lay before the reader a non-technical account of the problem, its solution, and recommendations for applying the techniques to particular situations. The next two chapters give in more detail the methods, data, and calculations upon which the more general discussion rests. This section will perhaps be of value only to the technical reader. The separation of the technical matters from the more general and practical aspects of the treatment of a problem is a very wholesome departure from the traditional presentation of a dissertation. In the concluding chapter are the standards for selecting reading materials and it is perhaps here that the authors of books and pamphlets for adult groups and directors of adult education will want to linger, for this chapter contains valuable suggestions and implications bearing on a large number of factors that enter into the selection and preparation of suitable reading materials for adults.

Anyone constructing a curriculum for adult education will do well to study this work with a great deal of care. It contains many practical suggestions and implications relative to his task.

No attention has been given in this review to the experimental techniques and procedures of the study. Lack of

space precludes a discussion of this aspect. But the student interested in the application of experimental techniques to the problem of determining the properties of good reading materials would find here many helpful suggestions.—B. O. S.

GILLSON, MARGERY STEWART—*Developing a High School Chemistry Course Adapted to the Differentiated Needs of Boys and Girls*. New York: Bureau of Publications, Teachers College, Columbia University. 1936.

This study is based on the assumption that the content of a high school chemistry course may be determined satisfactorily by the criterion of adult usage. The general pattern of the study is, therefore, the determination of the elements of chemical knowledge that function in the lives of adults. The questionnaire technique is used in the collection of the data. The questionnaires are made from an analysis of textbooks in chemistry and books written by scientists for laymen. Three different questionnaires are used in the study. One questionnaire is constructed to determine the functional elements of chemistry among a group of adults who had a college preparatory course in high school. A second questionnaire is used to determine the elements functional for those who had household chemistry in high school. These two groups together comprise what is termed the "special" group. And a third questionnaire is used to determine the functional elements for those who make up a "general" group, consisting of business and professional men and women, housewives, and teachers. From reports on these questionnaires those elements which are most useful to men, those which are most useful to women, and those which are most useful to both men and women are determined.

The basic content of a course in high school chemistry is suggested along with items that might well be omitted from present courses. Among other recom-

mendations, it is held that the second semester of chemistry for girls should be foods and textiles rather than a detailed study of metals. In the last chapter of the study an effort is made to show how the findings may be applied in practice. Here it seems that the author runs into a fundamental problem which she leaves without adequate treatment. She introduces the theory of building the curriculum around child interests and needs and then attempts to harmonize it with the adult approach which underlies her whole study. Here she runs into a fundamental dichotomy which is barely recognized, if at all, and which her treatment fails to remove. Perhaps if she had considered this problem at the outset of her study instead of at the end, the study would have shaped itself up so that this dichotomy would not have been so pronounced. Nevertheless, the work is well done and should be very helpful to anyone reconstructing high school chemistry courses.—B. O. S.

PATTY, WILLIAM L.—*A Critique of Three Educational Theories*. New York: Bureau of Publications, Columbia University. 1936.

This is a study of the theories of curriculum-building held by Franklin Bobbitt, W. W. Charters, and C. C. Peters. The study is based upon a critical analysis of the representative works of these students of the curriculum and upon a conceptual analysis of their basic positions. The study is consequently a philosophical one and lies within the range of philosophical and logical criticism. A brief sketch of the intellectual background out of which the curriculum theories of Bobbitt, Charters, and Peters originated is given. Their work is definitely tied up with the mechanistic ideology of the commercial and industrial world. It is shown that their theories of curriculum making are also based upon mechanistic scientific thought—atomism and the separation of

time and space—quite out of harmony with the picture of nature which twentieth century science has painted. Moreover, their theories are shown to be based upon a dualistic metaphysics and an absolutistic logic. The criticism is written

from an organismic standpoint. And the argument lends support to the activity movement as contrasted to the scientific, mechanistic movement in curriculum making.—B. O. S.

REVIEWS

RUGG, HAROLD—*American Life and the School Curriculum*. New York: Ginn & Company. 1936. 471 p.

It is probably necessary for a prolific writer such as Dr. Rugg to stop every once in a while and consolidate his work. This volume must be for that purpose, because there is little new material presented, few new thoughts or revised statements of position; but nearly every chapter refers to a previous work by the same author and is explained as a "resume" or "brief statement" of that work. Considered as an organized presentation of Dr. Rugg's previously published work, this book has a valuable place.

Book One is devoted mainly to the inevitable pedagogical prologue of curriculum discussions which elaborate the following points: a. our cultural heritage came from Europe; b. some time between the sixteenth and nineteenth century an intellectual awakening produced, among other things, scientific methods of thought, increasing democracy, and an industrial revolution as a sort of mechanical hangover; c. Mother Nature was lavishly kind to North America; d. we "done her wrong"; e. pioneer days are over, opportunity is scarce and wealth concentrated; f. times are turbulent and full of woe.

It seems to this reviewer that curriculum experts should grant students in education enough intelligence to know these things and get on to the job at hand. This is especially true of Dr. Rugg. He may leave one annoyed with his historical repetition, but when he

gets into the subject of the curriculum, its purpose, its scope, and its administration, his discussions are exciting and enriching.

Book Two gives us the full benefit of Professor Rugg's wide experience from which he draws for interpretive material in curriculum construction. Art, psychology, sociology, fields in which he is intimately acquainted, contribute to a picture of learning for children that convinces the reader that learning should be an exciting adventure into rich living. If one cannot find time to read the entire volume, there are three chapters that should not be missed. Chapters XVIII, XXII, and XXIV present discussions that should be of great value to all teachers.

WHIT BROGAN,
Northwestern University.

HANNA, PAUL R.—*Youth Serves the Community*. New York: D. Appleton-Century Company. 1936. 303 p. \$2.00.

In the literature of the teaching of social studies and in the reports of teachers and supervisors one increasingly finds that the youths in our schools are undertaking real projects affecting the social life of the community. This volume compiled by Paul Hanna summarizes a large number of socially useful community enterprises in the United States and abroad. A sampling of projects represented in this volume is concerned with the protection of the school community from traffic and other accidents. For example, the pupils of the

Seattle, Washington, public schools organized a campaign to prevent the wanton destruction of property on Halloween. As a result of assembly addresses and radio talks the city experienced the quietest Halloween on record.

Numerous enterprises in cooperative improvement and decoration of the community are reported. A variety of civic projects illustrate the ability of youth to assume the responsibility for the improvement of social and economic life. On the Island of St. Helena in South Carolina the pupils in Penn School induced their parents to set aside an acre of land to be worked by them as a learning project. Up to the time of this

experiment cotton was the only crop raised; then the pupils undertook to raise corn. The first year of the children's crop was valued at \$3,000. Later they experimented with crops for a typical island farm including food for home use, food for the stock, and crops for land improvement.

There is a particularly challenging introduction by Dr. William H. Kilpatrick which discusses the role of cooperative community activities in the modern school. The volume meets a current need for illustrations of learning situations in which young people have intimate contact with their social environment. H. H.

NEW PUBLICATIONS

BOOKS

- BAKER, H. J. AND TRAPHAGEN,—*The Diagnosis and Treatment of Behavior-Problem Children*. Macmillan Co. 1936. 393 p. \$3.00.
- CLARKE, ERIC—*Music in Everyday Life*. W. W. Norton & Co., New York. 1935. 288 p. \$3.00.
- GRAHAM, F. D. AND SEAVER, C. H.—*Money: What It Is and What It Does*. Newson & Co. 1936. 158 p.
- HARTMAN, GERTRUDE—*The Making of the Constitution*. Social Science Publications, 140 E. 63rd St., New York City. 1936. 104 p. Paper covers. 75¢. Teachers' Guide, 25¢ extra.
- JENKINS, FRANCES—*Language-Development in Elementary Grades*. Thomas Nelson & Sons. 1936. 256 p. \$2.00.
- WRIGHTSTONE, J. W.—*Experimental High School Practices*. Bureau of Publications, Teachers College, Columbia University, New York City. 1936. 194 p. \$2.25.

BULLETINS AND PAMPHLETS

- BELL, VIOLA M.—*Chemistry Used in Foods and Nutrition Courses*. Bureau of Educational Research Monographs, No. 21. Ohio State University, Columbus, Ohio. 1936. 84 p. Paper covers.
- CALIFORNIA, STATE DEPARTMENT OF EDUCATION—*Recent Developments in Secondary Education in California*. October 1, 1936. 51 p. Paper covers.

FISK UNIVERSITY, CURRICULUM LABORATORY—*Curriculum Materials (Free and Inexpensive Materials of Instruction)* Curriculum Bulletin No. 2. Fisk University, Nashville, Tennessee. 1936. 89 p. Paper covers.

GEORGIA STATE DEPARTMENT OF INSTRUCTION—*Georgia Program for Improvement of Instruction*. Preliminary Report of Procedures Committee on the Community as a Source of Materials of Instruction. Atlanta, Ga. 1936. 53 p. Mimeographed.

HOLY, T. C. AND ARNOLD, W. E.—*Standards for the Evaluation of School Buildings*. Bureau of Educational Research Monographs, No. 20. Ohio State University, Columbus, Ohio. 1936. 79 p. Paper covers.

HOLY, T. C.—*Survey of the Schools of Euclid, Ohio*. Bureau of Educational Research Monographs, No. 22, Ohio State University, Columbus, Ohio. 1936. 177 p. Paper covers.

KLAR, WALTER H. AND OTHERS—*Report of the Committee on Art Education in the High Schools of the United States*. Part I. Federated Council on Art Education, 745 Fifth Avenue, New York City. 1935. 134 p. Paper covers.

LOUISIANA STATE DEPARTMENT OF EDUCATION—*Louisiana Program of Curriculum Development. (Study Program)* State Department of Education, Baton Rouge, La. 1936. 166 p. Paper covers.

MICHIGAN, STATE DEPARTMENT OF PUBLIC INSTRUCTION—*Proposal for an Experimental Study of the Secondary School Program in Michigan*. 1936. 11 p. Paper covers.

MISSISSIPPI STATE DEPARTMENT OF EDUCATION
—*Mississippi Program for the Improvement of Instruction*. State Department of Education, Jackson, Miss. 234 p. Paper covers. 50¢.

Teachers' Lesson Unit Series. Teachers College. Columbia University. No. 88—*Budgeting—the Arithmetic of Finance* (Grade VI); *Our Government and Ourselves* (Grade VII); No. 89—*An Old World Festival—A Social Study of Europe* (Grade VII); *Our Classroom Travel Bureau* (Grades VII-IX); *Our Trip Abroad* (Grade VI); No. 90—*History of the World from Its Creation* (Grade IV); *Our School Becomes the World* (Grade III); *Our School Becomes the City* (Grade IV); *History of Lighting* (Grade IV); No. 92—*The Calendar Teaches Arithmetic and Geography* (Grade I); *Water* (Grade I); *Our Farm* (Grade I); *Our Living World* (Grade I); No. 94—*Our Feathered Friends* (Grade IV); *Common Land Birds* (Grade IV); *Sightseeing Animal Tours* (Grade IV); *Our Physical World* (Grade III).

TENNESSEE STATE DEPARTMENT OF EDUCATION
—*Program for the Improvement of Instruction*. State Department of Education, Nashville, Tennessee. 1936. 85 p. Paper covers.

COURSES OF STUDY

ARKANSAS STATE DEPARTMENT OF EDUCATION
—*A Tentative Course of Study for Arkansas Schools. Elementary Section*. State Department of Education, Little Rock, Ark. 1936. 320 p. Paper covers.

ARKANSAS STATE DEPARTMENT OF EDUCATION
—*A Tentative Course of Study for Arkansas Schools. Secondary Section*. State Department of Education, Little Rock, Ark. 1936. 292 p. Paper covers.

EVANSVILLE, INDIANA, PUBLIC SCHOOLS—*Commercial Course of Study. Business III and IV*. 1936. 74 p. Mimeographed.

EVANSVILLE, INDIANA, PUBLIC SCHOOLS—*English Course of Study. English 10A*. 1936. 39 p. Mimeographed.

EVANSVILLE, INDIANA, PUBLIC SCHOOLS—*Job Opportunity Survey*. December, 1935. 1936. 24 p. Mimeographed.

FRESNO, CALIFORNIA, PUBLIC SCHOOLS—*Industrial Arts for the Secondary Schools*. 1936. 40 p. Mimeographed.

FRESNO, CALIFORNIA, PUBLIC SCHOOLS—*Social Science for High Eighth Grade. A History of American Government and Culture*, 1936. 41 p. Mimeographed.

FRESNO, CALIFORNIA, PUBLIC SCHOOLS—*Social Science in Low Ninth Grade. An Introduction to Problems of American Culture*. 1936. 41 p. Mimeographed.

FRESNO, CALIFORNIA, PUBLIC SCHOOLS—*Tentative Elementary Physical Education Program*. Grades One to Six, 1936. 31 p. Mimeographed.

FRESNO, CALIFORNIA, PUBLIC SCHOOLS—*Tentative Elementary Science Program*. Grades One to Six. 1936. 19 p. Mimeographed. (Issued separately for each grade.)

LOUISVILLE, KENTUCKY, PUBLIC SCHOOLS—*Social Business Education*. (A Tentative Course of Study in Consumer Education.) 1936. About 60 p. Mimeographed.

SHOREWOOD, WISCONSIN, PUBLIC SCHOOLS—*Sciences Tentative Program 1936-1937*. About 75 p. Grade II. About 40 p.

STERNER, A. P. AND BOWDEN, W. P.—*A Course of Study in Motion Picture Appreciation*. Educational and Recreational Guides, Inc., 125 Lincoln Avenue, Newark, N. J. 1936. 63 p. Mimeographed.



THE ANNUAL MEETING

The present schedule of meetings of the Society for Curriculum Study in New Orleans in February is as follows:

- Saturday, February 20, 9:30 A. M. Joint session with the Department of Supervisors and Directors of Instruction. See program below.
- Saturday, February 20, 12:15 P. M. Luncheon meeting, St. Charles Hotel. See program below.
- Saturday, February 20, 2:15 P. M. Joint session with the National Society for the Study of Education to discuss yearbook on *Reading*.
- Saturday, February 20, 6:00 P. M. Dinner of Committee on Regional Conferences and Meetings, R. D. Russell, Chairman.
- Saturday, February 20, 8:00 P. M. Joint session with the Department of Supervisors and Directors of Instruction. See program below.
- Sunday, February 21, 8:00 A. M. Breakfast. Annual meeting of the Executive Committee.
- Monday, February 22, 9:00 A. M. Regular session. Business meeting of the Society and discussion of state programs of curriculum development.
- Monday, February 22, 10:30 A. M. Session in cooperation with the National Association for Research in Science Teaching to discuss Thayer Commission report on science.

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JOINT SESSIONS

SOCIETY FOR CURRICULUM STUDY

DEPARTMENT OF SUPERVISORS AND DIRECTORS OF INSTRUCTION
New Orleans, Louisiana

February 20, 1937

Saturday Morning, 9:30 A. M.

THE JOINT YEARBOOK ON THE CURRICULUM, I

RUDOLPH LINDQUIST, *President, Department of Supervisors and Directors of Instruction*, Presiding

- I. The General Plan of the Yearbook
HENRY HARAP, *Chairman of Yearbook Committee*
- II. Recent Curriculum Trends
Presentation: HAROLD HAND, Stanford University
Critique: ERNEST HORN, State University of Iowa
- III. Issues in Curriculum Development
Presentation: WILL FRENCH, Superintendent, Long Beach, California
Critique: GEORGE COUNTS, Teachers College, Columbia University
- IV. The Philosophy of the Curriculum
Presentation: LAURA ZIRBES, Ohio State University
Critique: WILLIAM H. KILPATRICK, Teachers College, Columbia University
- V. Planning for Curriculum Development
Presentation: PAUL T. RANKIN, Detroit, Michigan
Critique: SIDNEY HALL, State Superintendent, Virginia

Saturday Evening, 8:00 P. M.

THE JOINT YEARBOOK ON THE CURRICULUM, II
H. L. CASWELL, *Chairman, Society for Curriculum Study*, Presiding

- VI. Organizing Educational Forces for Curriculum Development
Presentation: E. O. MELBY, *Northwestern University*
Critique: H. B. BRUNER, *Teachers College, Columbia University*
- VII. The Criteria for the Evaluation of Case Studies of Curriculum Development
Presentation: C. W. KNUDSEN, *Harvard University*
Critique: ALICE KELIHER, *Chairman, Commission on Human Relations, Progressive Education Association*
- VIII. Case Studies of Curriculum Development in Schools
Presentation: PRUDENCE CUTRIGHT, *Assistant Superintendent, Minneapolis*
Critique: JULIA HAHN, *Public Schools, Cashington, D. C.*
- IX. Case Studies of Curriculum Development in Classrooms
Presentation: EDITH BADER
Critique: I. JEWELL SIMPSON, *Assistant State Superintendent, Maryland*
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FIRST ANNUAL LUNCHEON

February 20, 1937
Saturday, 12:15 P. M.

A REVIEW OF THE ACTIVITIES OF THE SOCIETY
H. L. CASWELL, *Chairman of Executive Committee*, Presiding

Music During Luncheon

Reports from the Committees of the Society (Time Limited to Five Minutes Each)

- The Executive Committee
H. L. CASWELL, *George Peabody College for Teachers, Chairman*
- The Editorial Board of the *Curriculum Journal*
HENRY HARAP, *Ohio State University, Chairman*
- The Committee on Regional Conferences and Meetings
R. D. RUSSELL, *University of Idaho, Chairman*
- The Committee on Courses of Study
H. B. BRUNER, *Teachers College, Columbia University, Chairman*
- The Committee on Text Books
M. E. HERRIOTT, *Los Angeles Public Schools, Chairman*
- The Committee on Teacher Training
RAYMOND D. BENNETT, *Ohio State University, Chairman*
- The Committee on Annual Meeting
I. KEITH TYLER, *Ohio State University, Chairman*
- The Committee on Annual Bibliography
EDGAR DALE, *Ohio State University, Chairman*
- The Committee on Integration
J. THOMAS HOPKINS, *Teachers College, Columbia University, Chairman*
- The Committee on Higher Education
W. E. PEIK, *University of Minnesota, Chairman*
- The Committee on the Community School
SAM EVERETT, *Northwestern University, Chairman*

- A Consideration of *Building America* (Total Time, Fifteen Minutes)
PAUL R. HANNA, *Stanford University, Chairman of Editorial Board*
JAMES E. MENDENHALL, *Editor*
PAUL E. DROST, *Coordinator*

STATE CURRICULUM PROGRAMS

February 22, 1937

Monday Morning, 9:00 A. M.

Paul R. Hanna, Presiding

MEMBERS OF THE PANEL

- MISS DALE ZELLER, State Department of Education, Emporia, Kansas.
ED MCCUISTON, State Department of Education, Little Rock, Arkansas.
W. A. STIGLER, State Department of Education, Austin, Texas.
A. A. DOUGLAS, State Department of Education, California.
DAVID PETERS, State Department of Education, Richmond, Virginia.
L. M. LESTER, State Department of Education, Atlanta, Georgia.
KENNETH L. HEATON, State Department of Public Instruction, Lansing, Michigan.
W. E. ARMSTRONG, Supervisor of High Schools, Salt Lake City, Utah.
L. S. TIREMAN, University of New Mexico, Albuquerque.
DOAK S. CAMPBELL, George Peabody College for Teachers, Nashville, Tennessee.
R. D. RUSSELL, University of Idaho, Moscow, Idaho.
FRED AYER, University of Texas, Austin, Texas.
EDGAR DRAPER, University of Washington, Seattle, Washington.

